

THE GRASSES AND SEDGES OF THE MALAY PENINSULA.

BY

H. N. RIDLEY, M.A., F.L.S.



N publishing this list of the Grasses and Sedges of the Peninsula (*Gramineæ* and *Cyperaceæ*), I am well aware that it is by no means complete. From many parts of the Peninsula we have no specimens of these families, and especially is this the case as regards the great mountain region which traverses the Peninsula. From the uplands we shall doubtless procure many interesting kinds when the country is more opened up, and from the northern parts of the Peninsula bordering on Siam we may expect to obtain many Assam and Burmese species not yet met with. This list rather represents the lowland glumaceous flora of the South.

A country which like this is covered with dense forest for the greater part is, as a rule, poorly provided with grasses and sedges, for few of these plants occur in high forest. Yet on the whole there is a considerable variety, and among them not a few very interesting and curious plants are to be met with.

I am much indebted to Professor HACKEL of St. Polten for identifying many of the grasses, and to Mr. C. B. CLARKE for much assistance in the matter of *Cyperaceæ*.

Habitats.—The most productive localities for grasses and sedges are the damp low swamps and rice-fields, the banks of streams and the sandy shores of rivers and seas. The open country where the jungle has been cleared and secondary forest is returning is very barren of plants of interest, although large tracts are covered with glumaceous plants. *Imperata*, *Ischænum*, *Paspalum*, *Panicum* of the *Digitaria*

section form the bulk of the grass flora here, while the *Cyperaceæ* are represented by a few common *Sclerias*, *Rhynchospora Wallichii* and *Fimbristylis*. The low swampy ground and rice-fields are rich in the genera *Panicum*, *Isachne*, *Leersia*, *Scirpus*, *Rhynchospora*, *Scleria*, *Heleocharis* and *Cyperus*. Along the streams and rivers some fine species may be met with, among which *Scleria oryzoides*, *Scirpus grossus* and *Sc. mucronatus*, *Lepironia*, many *Cyperi*, the common reed *Phragmites Roxburghii*, and the wild sugar-cane *Saccharum arundinaceum* and *S. Ridleyi* are very conspicuous; the last three grasses forming huge thickets in many places. The *Sclerias*, too—*Scl. malaccensis* and *Scl. oryzoides*—often cover large tracts of wet open land, forming jungles about six feet high, very laborious to traverse. In the dense forests the glumaceous plants almost disappear, yet there are several very interesting genera to be met with. The large group of *Hypolytreæ* is well represented here by many species of *Mapania* and *Pandanusphyllum*. The latter of which, as the name denotes, so much resemble the smaller species of screw-pines that, unless the inflorescence is found, they may be easily mistaken for them. Grasses are almost unrepresented in the deep jungle. *Centotheca lappacea* and *Lophatherum*, however, sometimes find their way far in, being transported widely by their very adherent spikelets attaching themselves to wild beasts. In many places, too, there are large tracts of bamboos, but at present specimens of these in flower have rarely been met with, so that of what species they are is not yet known.

On the sandy districts by the sea and along the river banks, a large number of species are to be met with, and among them several very striking plants. Such are the Porcupine grass (*Spinifex*), *Thouarea*, a curious creeping grass, *Schænus calostachyus*, Poir, two species of *Eriachne*, *Gahnia*, *Lepturus*, *Tricostularia* and many other species worthy of cultivation.

Some of our native grasses are worthy of cultivation as ornamental plants, among these the *Saccharums* and *Phragmites* form large tufts like those of Pampas grass. The *Pandanusphylla* and *Mapaniæ* are fine foliage plants suited for pot culture, and *Pogonatherum* and *Fimbristylis monophylla* with

their fine leaves and stems also make elegant pot plants for mingling with those of larger foliage.

The larger *Andropogons*—*A. citratus*, *A. nardus* and *A. muricatus*—are cultivated for their sweet scent; the first producing the well known lemon grass oil, the second citronella. Of other grasses of economic value, it is only necessary to mention rice (*Oryza sativa*), sugar-cane (*Saccharum officinarum*), millet (*Sorghum vulgare* and *S. saccharatum*), and the numerous species of bamboos cultivated here.

The plumed seeds of *Imperata arundinacea* are used by the Malays to stuff pillows; of the stem of *Scirpus grossus* and *Lepironia mucronata* they make mats, and walking sticks are made from *Thysanolaena* in Sungei Ujong. A kind of beer was at one time made from the rhizomes of Lalang, which contain a good deal of sugar. The manufacture was not remunerative and was soon given up.

The grasses and sedges which form the greater part of the turf here are *Andropogon acicularis*, *Cynodon dactylon*, *Ischænum ciliare*, besides which, in some places *Fimbristylis monophylla*, *F. tenera* and *F. communis* form a considerable portion. I have seen a lawn almost entirely composed of *Zoysia pungens*, a soft inland form. It makes a very deep soft turf, but is unsuitable for tennis lawns, except in dry places, where it becomes short and compact. For sandy places *Andropogon aciculare* and *Cynodon dactylon* are best. Where the soil is better the *Ischænum*s form a better class of turf. The best native fodder grass here is unquestionably *Ischænum muticum*; *I. ciliare* and *I. timorense* are also very good. *Panicum jumentorum*, the Guinea grass, has been introduced as a fodder plant, but must be used with caution, as horses have been killed by overfeeding with it.

Distribution.—A large number of the glumaceous plants of the Peninsula are very widely distributed throughout the Indo-Malayan region. A few are cosmopolitan, occurring in all parts of the world that are warm enough for them; such are *Cyperus polystachyus*, *C. rotundus*, *C. distans*, and *Fimbristylis communis* among *Cyperaceæ*; *Cynodon dactylon*, *Digitaria sanguinalis*, *Eleusine indica* among grasses. A

small number of sea-shore plants have an Australian facies; such are *Schænus calostachyus*, *Fimbristylis sericea*, *Spinifex squarrosum*, *Lepturus repens*. With them occur also such Australian forms as *Casuarina equisetifolia*, *Leucopogon*, *Dianella*, *Melaleuca* and *Philydrum* in the lowlands near the sea; and on the mountains of the interior we also meet with *Boeckia*, *Leptospermum*, *Cryptostylis*, *Corysanthes* and *Dacrydium*. All these are to be found also in the Malayan Archipelago, and a few, e.g., *Dianella*, *Cryptostylis*, *Spinifex* and the *Lepturus* as far West as Ceylon. This seems to indicate a wave of Australian immigrants westwards, some of which, such as *Casuarina* and the grasses, at least were brought by sea-currents along the island shores.

There are two grasses which are certainly of American origin, viz., *Chloris barbata* and *Paspalum conjugatum*. The latter is very common in the cultivated districts, but seems to disappear in the interior. In Penang, are two Indian grasses which do not appear in the South of the Peninsula, viz., *Thysanolæna acarifera*, Nees, which is typically Burmese, and *Eragrostis Wightiana*, a rare grass only known in the mouth of the Hooghly and in one place in Ceylon.

Native names.—Such native names as I have been able to find I have inserted. The derivations or translations are only suggested. It is often very difficult to get at the idea of a Malay when he names a plant, so many of the names are absurd and apparently meaningless.

The common name for grass is "Rumput," but this means also almost any small plant, such as Rumput Kra-Nas, Ape's rice grass, *Vandellia crustacea*. "Senderaian" is a general name for *Cyperi* and *Sclerias*.

CIPERUS.

C. pumilus, Linn. Sandy places. Not common.

Singapore—Changi, Selitar.

Malacca—Ayer Panas. Also collected by GRIFFITH.

Penang—Dato Kramat.

Native name, Rumput Taman (Malacea).

C. polystachyus, Rottb. Very common in waste ground, sea shores, etc.

Singapore—Very common everywhere.

Penang—Waterfall, Government Hill, Telok Bahang, etc.

Sungei Ujong—Seremban.

Pahang—Pekan, Sungai Meang.

Kelantan—Kamposa.

Native name, Rumput Parah Betina.

Var. *laxiflora*. Usually in damper spots.

Singapore—Changi, Tanglin.

Penang—Telok Bahang.

Selangor—Bukit Kudah.

Var. *ferruginea*.

Singapore—KURZ.

C. alopecuroides, Rottb. Damp spots by streams. Rare.

Penang—Bagan Jermal.

Kelantan—Kamposa.

C. castaneus, Willd.

Perak—Dr. KING's Collector.

These are the only specimens I have seen from the Peninsula.

C. cuspidatus, H. B. K.

Penang—Dato Kramat. This is the form *angustifolia*.

C. compressus, L. Common in waste ground.

Singapore—Changi, Tanglin, etc.

Penang—Sepoy Lines.

Malacca—Ayer Panas.

Sungei Ujong—Port Dickson.

Native name, Rumput Tiga Sari (Malacca), "three angled grass."

C. Zollingeri, Steud. Common in kampongs, orchards, etc.

Singapore—Tanglin, Changi, Fresh Water Isle.

Penang—Waterfall Hill, Government Hill, Telok Bahang.

Pahang—Pekan.

Malacca—Pulau Besar.

C. platystylis, R. Br. Was collected in Penang by WALLICH, and distributed with the number 3359D. I have not met with it.

C. Griffithii, Steud. Common on sandy shores on both coasts. This is a very variable plant, the most striking form of which is one with swollen thickened spikelets, which was described as *C. radians* by NEES, but which is certainly not specifically distinct. It is much less common than the typical *C. Griffithii* with flat spikelets, but occurs mixed with it, at Pekan. There is also a dwarf form with very short stem, having the lower spikelets almost buried in the sand, and I met also with a curious flaccid form with long grassy leaves, and the glumes almost, or indeed in some specimens quite, foliaceous.

6 GRASSES AND SEDGES OF THE MALAY PENINSULA.

ous. This was growing in a very damp spot where a stream entered the sand, at Sungai Meang in Pahang.

Singapore—Changi. Plentiful.

Malacca—Pulau Besar.

Penang—Telok Bahang, Batu Feringgi.

Pahang—Rumpin River, Cherating, Sungai Meang, Pekan, Kwala Pahang. Very common along the coast.

Kelantan—Kamposa.

C. haspan, L. Common in swampy spots.

Singapore—Tanglin, Tivoli, etc.

Penang—Tanjong Bunga.

Selangor—Kuala Lumpur.

Malacca—Chabau, Ayer Panas.

Pahang—Kuala Pahang.

Native names, Rumput Sumbo (? "wick grass"), R. Bilis Jantan (Bilis is a kind of fish, "male fish grass," probably because it grows by streams).

C. flavidus, Retz. With the preceding, but less common.

Singapore—Tanglin.

Penang—Tanjong Bunga.

C. elegans, L. (*C. diffusus*, Vahl). Woods. Fairly common.

Singapore—Bukit Timah.

Selangor—Pataling Caves, Kuala Lumpur.

Penang—Pulau Betong. Also collected here by WALLICH (No. 3474).

Pahang—Katapong near Pekan.

C. turgidulus, C. B. Clarke. Common, especially near the sea in sandy kampongs and open woods.

Singapore—Changi.

Penang—Tanjong Bunga, Waterfall.

Sungei Ujong—Gunong Brembun.

Pahang—Rumpin River, Praman, Pekan.

Siam—Bangtaphan (Dr. KEITH).

Native name, Rumput Chukor Kerbau, "buffalo razor-grass."

C. iria, L. A common weed in gardens and plantations.

Singapore—Tanglin, Jurong, Chan Chu Kang, Changi.

Penang—Bagan Jermal, Waterfall, Dato Kramat.

Kelantan—Kamposa.

Malacca—Ayer Panas.

Native name, Rumput Suloh Bulahlang (Malacca). Literally, "dragon-flies torch."

Var. *micriria*. This is a very small form, only an inch or so tall,

with narrow leaves, which not rarely occurs in damp spots rather speedily dried. I met with it at Toas in Singapore.

C. pulcherrimus, Willd. Damp spots.

Penang—Pulau Betong.

Selangor—Kuala Lumpur.

Pahang—Katapong.

Siam—Bangtaphan (Dr. KEITH).

C. distans, Linn. fil. A common roadside and waste ground weed here, as it is almost all over the tropics.

Singapore—Ang Mo Kio, Tanglin, and many other places.

Penang—Sepoy Lines, Dato Kramat.

Selangor—Caves, Kuala Lumpur.

Kelantan—Kamposa.

Siam—Bangtaphan (Dr. KEITH).

Malacca—Pulau Undan.

Native name, Rumput Vanggi (Malacca). Perhaps “Wangi” “scented grass.”

C. malaccensis, Lam. Muddy streams near the sea, and on the beach. Not very common.

Penang—Waterfall.

Pahang—Pekan.

Tringganu—Pulau Ketam.

Kelantan—Kamposa.

C. pilosus, Vahl. One of the commonest species, and somewhat variable in height, colouring and compactness of umbel.

Singapore—Changi, Ang Mo Kio, Tanglin, Jurong, Chan Chu Kang.

Johor—Tanah Merah Road.

Malacca—Common.

Penang—Waterfall, Tanjong Bunga.

Selangor—Kuala Lumpur near the Club, Bukit Kuda.

Sungei Ujong—Port Dickson, Kuala Sawar.

Pahang—Pekan, Katapong.

C. procerus, Rottb. Not common.

Penang—Waterfall.

Kelantan—Kamposa.

Malacca—Chabau, Ching.

Native name, Rumput Munsiang.

C. rotundus, L. A common weed.

Singapore—Tanglin, Chan Chu Kang, &c.

Penang—Bagan Jermal, Sepoy Lines.

Pahang—Pekan.

8 GRASSES AND SEDGES OF THE MALAY PENINSULA.

Malacca—Common in the town and elsewhere.

Siam—Bangtaphan.

C. stoloniferus, Retz. Muddy shores, and grassy spots near the sea. Common.

Singapore—Changi, Tanjong Ru; also Pulau Buru and Raffles Lighthouse Island.

Penang—Bagan Jermal.

Pahang—Kuala Pahang.

Kedah—Langkawi Islands.

Malacca—Shores near the town.

C. auricomus, Sieber. Damp spots near stream. Local.

Penang—Dato Kramat.

Selangor—Bukit Kudah, Kuala Lumpur.

Pahang—Katapong near Pekan.

Sungei Ujong—Kuala Sawar.

C. elatus, L. Was collected in Penang by WALLICH (No. 3341a).

I have not seen any other specimens.

C. (§ Diclidium) ferax, A Rich. Damp spots. Rare.

Selangor—Kuala Lumpur.

Pahang—Katapong.

MARISCUS.

M. dilutus, C. B. Clarke. Damp spots. Not rare.

Singapore—Bukit Timah, Selitar.

Selangor—Kuala Lumpur.

Perak—Gopeng (Calcutta Herbarium, C. B. CLARKE).

Pahang—Pekan.

Kelantan—Kamposa.

M. pennatus, Lam. Sea shores common, more rarely inland.

Singapore—Selitar, Bajau, Tanjong Ru.

Johor—Tana Runto.

Malacca—Ayer Panas, Alor Gajah.

Kelantan—Kamposa.

Pahang—Sungei Meang.

Native names, Rumput Bumbot, "twisted grass," R. Surai, R. Sulengsen.

M. biglumis, Gaertn. Local.

Var. *cylindrostachys*.

Penang—Pulau Betong.

Sungei Ujong—Pantai.

Pahang—Pulau Tioman.

Singapore—Common.

Var. cyperina.

Penang.

Pekan—Katapong.

M. dubius, Rottb. Very common on sandy shores by the sea.
Singapore—Cathedral compound, Changi.

Penang—Tanjong Bunga.

Province Wellesley—(Dr. KING).

Malacca—Pulau Besar.

Pahang—Pekan, Rumpin River, Sungai Meang.

Kelantan—Kamposa.

Siam—Bangtaphan (Dr. KEITH).

M. umbellatus, Vahl. Very common in waste grounds, woods, etc.
Var. typica.

Sungei Ujong—Gunong Bumbur.

Pahang—Katapong.

Var. cylindrostachys. The commonest form.

Singapore—Ang Mo Kio, Selitar, Tanglin.

Johor—Tanah Runto, Pengerang.

Malacca—Alor Gajah.

Selangor—Kuala Lumpur.

Penang—Government Hill.

Pahang—Rumpin River.

Siam—Bangtaphan (Dr. KEITH).

Var. picta. A very compact headed form with almost sessile squarrose spikes.

Sungei Ujong—Gunong Bumbur.

Siam—Bangtaphan (Dr. KEITH).

The native names are Rumput Tangot Baong "bearded umbrella grass," and Rumput Pinang "palm grass."

KYLLINGA.

K. monocephala, Rottb:

Singapore—Botanic Gardens, etc.

Malacca—Ayer Panas.

Pahang—Pekan.

Native Names, Rumput Tuki, Rumput Butang, "button grass," a name also applied to *Eriocaulons* and *Rhynchospora Wallichii*.

K. brevifolia, Rottb. A common weed.

Singapore—Almost everywhere, Selitar, Bajau, etc.

Penang—Government Hill.

Johor—Scudai River.

Pahang—Kwala Pahang, Pekan.

Malacca—Common.

K. cylindrica, Nees. Local. Not at all common.

Singapore—Raffles Institute (HULLETT).

Siam—Bangtaphan (Dr. KEITH).

FIMBRISTYLIS.

F. nutans, Vahl. Damp marshy spots on sandy heaths. Local.

Singapore—Changi.

Malacca—Pulau Besar.

Penang—Telok Bahang, Tanjong Bunga.

Pahang—Rumpin River, Kwala Pahang.

F. schoenoides, Vahl.

Penang—Telok Bahang, Tanjong Bunga.

F. argentea, Vahl. Sandy banks of rivers. Rare.

Kelantan—Kamposa.

F. oestivalis, Vahl. Damp sandy spots.

Singapore—Tanglin.

Pahang—Katapong, Kwala Pahang.

Native name, Rumput Surai.

F. diphylla, Kth. Very common.

Singapore—Changi, Tanglin, Selitar, etc.

Malacca—Pulau Besar near the town.

Sungei Ujong—Seremban.

Penang—Waterfall.

Johor—Tanah Merah Besar.

Pahang—Pekan.

Native names, Rumput Parah (Parah is a measure), R. Pūrun Batu, "mat grass," which grows in stony places.

F. sericea, R. Br. Sandy shores. Rare. East coast only.

Pahang—Cherating, Kwala Pahang, Pekan, Sungei Meang.

Kelantan—Kamposa.

F. pauciflora. (*F. malaccana*, Boeck. *F. filiformis*, Kth). Very common.

Singapore—Abundant—Tanglin, Changi, Chan Chu Kang, Government Hill, Rochor, Pulau Tekong.

Johor—Tanah Merah Road.

Sungei Ujong.

Penang—Waterfall, etc.

Pahang—Pekan, Praman.

Native name, Rumput Girah.

F. tenera, Var. *obtusata*, C. B. Clarke. Not rare. In sandy open

places. Mr. CLARKE says "a very remarkable plant, which I have had several times before. It has the leaves of *F. disticha*, but the glumes are not distichous. It is perhaps a species."

Singapore—Botanic Gardens in the turf, Jurong sandy spots, Bukit Mandai roadside, Bukit Timah.

Penang—Telok Bahang.

Malacca—Sungei Baru Ulu.

Pahang—Kuala Pahang.

F. asperrima, Beckler. Forms large tufts in woods. Not very common.

Singapore—Bukit Mandai (base of the hill), Botanic Gardens a weed in the flower beds).

Penang—Government Hill, Tanjong Bunga, Waterfall, Telok Bahang.

Malacca—Tanjong Kling, Bukit Bruang.

Sungei Ujong—Gunong Burumban.

Native names, Rumput Siamese. Perhaps from "Siya," "useless."

R. Bavang (Sungei Ujong). Perhaps "Bawang," "onion grass," from the resemblance of its leaves to those of an onion. R. Pulot (Sungei Ujong), "rice grass."

F. miliacea, Vahl. Common in muddy damp spots.

Singapore—Tanglin, Ang Mo Kio, Selitar, etc.

Penang—Waterfall, Tanjong Bunga.

Malacca—Ayer Panas, Ching, etc.

Johor—Tanah Runto.

Pahang—Pekan, Kuala Pahang.

Kelantan—Kamposa.

Native name, Rumput Tai Kerbau "buffalo dung grass" (Malacca).

This is probably so called from its coming up where buffaloes have been feeding, these animals eating it, and passing the seed which eventually germinates.

F. globulosa, Kth. Damp spots. Local.

Malacca—Bukit Sabukor, Ayer Panas.

Penang—Waterfall.

Pahang—Pekan, Kuala Pahang.

Var. *foliata*, Beckler. Malacca (Jagor).

Native name, Rumput Sandang.

F. retusa, Thwaites. Stated by BOECKELER (Cyperaceæ, p. 582) to have been gathered by GRIFFITH in Malacca. I have not met with.

F. glomerata, Nees. Sandy places usually near the sea.

Singapore—Tampenis Road near Bukit Mandai, Saranggong.

Johor—Tanah Merah Road.

Pahang—Cherating, Kwala Pahang.

Malacca—Tanjong Kling.

F. setacea, Benth. Wet spots. Local.

Singapore—Bank of the lake in the Gardens.

Pahang—Pekan.

F. longispica, Steud. Sandy spots, East coast. Rare.

Pahang—Kwala Pahang, Rumpin River, Pramau.

F. tetragona, Br. Sandy heaths.

Pahang—Kwala Pahang.

F. leptoclada Benth. Sandy places.

Singapore—Bukit Timah, Changi.

Pahang—Kwala Pahang.

SCIRPUS.

Sc. grossus, Linn. fil. Not rare in rice-fields. Used in making mats and baskets, under the name of Rumput Musiang and R. Murong (Penang).

Malacca and Penang—In the paddy-fields. Not rare.

Pahang—Near Pekan.

Kelantan—Kamposa.

Sc. mucronatus, L. Common in ponds and ditches.

Singapore—Swamp near Thompson Road, Reservoir, Ang Mo Kio, Tivoli.

Malacca—Ayer Panas.

Selangor—Kwala Lumpur, Klang.

Penang—Pulau Betong.

Pahang—Ayer Etam, Pekan.

Sungei Ujong—Kwala Sawar.

Sc. supinus, L. Local. In swamps and sawars.

Penang—Waterfall.

Malacca—Selanda.

It is called Rumput Prut Tikus in Malacca. This is literally “mouse intestine grass.”

S. juncoides, Roxb. In similar localities to the preceding.

Malacca—Bukit Sabukor, Bukit Tunggal.

Penang—Waterfall.

BULBOSTYLLIS.

B. barbatus, Rottb. Common on sandy paths, sea-shores, etc. A curious proliferous form occurred at Pekan, with long slen-

der branches one inch long springing from the unusually large capitulum of flowers.

Singapore—Changi, Tanglin, etc.

Penang—Batu Feringgi.

Perak.

Pahang—Kuala Pahang, Pekan, Katapong.

Tringganu—Pulau Ketam.

Malacca—Tanjong Kling, etc.

B. puberula, Poir. Sandy places. Rare.

Singapore—No locality (CANTLEY).

Karimon Isles.

Malacca—(GRIFFITH).

TRICOSTULARIA.

T. borneensis, Benth. Sandy heaths. Rare, but plentiful where found.

Pahang—Pekan, Praman.

FUIRENA.

F. glomerata, Lam. Common in swamps, rice-fields and ditches.

Singapore and Malacca—Common everywhere.

Penang—Waterfall, Sungai Ujong, Bukit Sulu.

Pahang—Pekan.

It is called Rumput Buku Buloh (Buku Bülöh, *i.e.*, grass with nodes like a bamboo), R. Kululot (Malacca), Trigonia grass. (The Kululot is a small species of bee, genus *Trigonia*, which collects pollen from this plant. R. Lidah Munkerang (Sungei Ujong).

LIPOCARPHA.

L. argentea, R. Br. Common in damp spots, by streams in open country.

Singapore—Very common, Tanglin, Chan Chu Kang, &c.

Malacca—Common.

Sungei Ujong.

Johor—Tanah Merah Road.

It is called Rumput Rotan, "rattan grass," in Sungai Ujong.

L. microcephala, Steud. Rare. A new record for the Peninsula.

Singapore—Chan Chu Kang in dry turf, Bukit Mandai ditch by roadside.

LEPIRONIA.

- L. mucronata*, Rich. Local in muddy spots near mangrove swamps.
 Singapore—Jurong, Tampenis Road near Changi.
 Malacca—(GRIFFITH).

ELEOCHARIS.

- E. chætaria*, R. & S. Common in shallow ditches and damp spots.
 An elongate floating form occurs not rarely in deeper water.
 Singapore—Tanglin, Chan Chu Kang, etc.
 Selangor—Kwala Lumpur.
 Pahang—Pekan, Kwala Pahang.
 Malacca—Tanjong Kling, Ayer Molek.
- E. capitata*, R. Br. Rare.
 Singapore—Changi, Tampenis. Plentiful in ditches by the roadside.
- E. variegata*, Var. *laxiflora*. Common in ditches, ponds, etc.
 Singapore—Tanglin, Reservoir.
 Penang—Telok Bahang, Waterfall.
 Pahang—Kwala Pahang.
 Malacca—Near Ayer Molek.
- E. ochrostachys*, Steud. Fairly common. Very closely resembling the preceding one.
 Singapore—Near the Garden lake.
 Malacca—Merlimau.
 Pahang—Katapong near Pekan.
- E. equisetina*, Presl. Rare.
 Penang—Stone quarry near the Waterfall.

MAPANIA.

- M. longa*. Benth. Rare. A large tufted plant growing in streams, resembling a *Sparganium* in habit.
 Singapore—Chan Chu Kang.
- M. humilis*, Naves and Villar. An elegant plant for pot cultivation, the leaves being somewhat like those of a *Pandanus*, and purple. Common in jungle.
 Singapore—Kranji, Bukit Timah, Bajau, Chan Chu Kang.
 Perak—Maxwell's Hill.
 Malacca—Selendar.
 Called Poko Seak Seak Rimbah. Perhaps this should be “Poko Siya Siya Rimbah,” i.e., useless jungle plant. It is used for fever.

M. bancana, Benth and Hook. A common woodland plant growing in damp spots in the jungles.

Singapore—Changi, Ang Mo Kio, Kranji, Toas, Selitar.

Malacca.

Penang—Waterfall Hill.

Sungei Ujong—Gunong Brumbun.

Selangor—Pataling.

Pahang—Pekan.

It is known as Rumphut Supidang, R. Giring Giring, "rattle grass," R. Susat Balukar (Sungei Ujong).

M. palustris, Benth and Hook. Forms large tufts in thick jungle.

Singapore—Pulau Ubin, Chan Chu Kang.

It is called Poko Mengkuang Tudong and P. Menkuang Lubo, from its resemblance to the Mengkuang (*Pandanus furcatus*).

M. multispicata, C. B. Clarke.

Singapore—Bukit Timah.

SCIRPODENDRON.

Sc. costatum, Kurz.

Singapore—North Selitar and Changi. I believe this very curious plant is not at all uncommon, but it resembles so much a young *Pandanus* that it is easily overlooked. It is a native of Ceylon and Java, and this new locality forms a connecting link between these two regions.

HYPOLYTRUM.

H. proliferum, Boeck. Local. In wet jungle.

Singapore—Selitar, Chan Chu Kang.

New to British India.

H. latifolium, Rich. In wet jungle.

Singapore—Chan Chu Kang, Jurong.

Pahang—Ayer Etam.

REMIREA.

R. maritima, L. Common on most of the sandy shores.

Singapore—Changi near the Police Station.

Malacca—Tanjong Kling.

Penang—Batu Feringgi.

Pahang—Cherating, Sungei Meang, Kwala Pahang.

Kedah—Langkawi Islands.

Siam—Bangtaphan (Dr. KEITH).

RHYNCHOSPORA.

- R. aurea*, Vahl. Very common in damp spots.
 Singapore and Malacea—Everywhere.
 Selangor—Batu Tiga, Kwala Lumpur.
 Pahang—Pekan.
 Sungei Ujong—Common, Kwala Sawar.
- R. Wallichiana*, Kunth. Not rare. In dry open country among bracken and lalang.
 Singapore—Jurong, Selitar, Bajau, etc., Sungei Murai. Fresh Water Island.
 Malacea—Pulau Besar, Bukit Tunggal. Also collected by GRIFFITH.
 Pahang—Kwala Pahang.
 It is called Rumput Butang ("button grass") in Singapore.
 Forma *sylvestris*.
 Leaves very slender and grassy; heads very small and compact, usually green and not red. Damp woods.
 Karimon Isles.
 Malacea—Mount Ophir (R. DERRY).
 Penang—Government Hill.
- R. glauca*, Vahl. Var. *chinensis*. Damp sandy spots. Rare.
 Singapore—Changi near Tanah Merah, abundant.
- R. malasica*, C. B. Clarke. Very local.
 Singapore—Bukit Mandai, growing in streams. I have only found this curious plant in this one spot, but it is very plentiful here. Mr. CLARKE says he has also seen it from Malacea and Borneo.

CLADIUM.

- Cl. Maingayii*, C. B. Clarke.
 Malacea—Mount Ophir (R. W. HULLETT).
Cl. glomeratum, Nees. Rare. In water.
 Singapore—Bukit Mandai, Changi towards Tanah Merah.
 "The first specimens I have seen from Malaya," says Mr. CLARKE.
 "It is a common Australian plant, also known from China and Japan."

SCHÆNUS.

- Sch. calostachyus*, Poir. Sandy places near the sea. Rare.
 Singapore—Changi near Tanah Merah. Abundant.
 Pahang—Praman near Pekan.
 Mr. CLARKE says:—"An interesting though apparently wide-

spread plant. I have it from various parts of Australia, Louisiade Archipelago, Waigiou and Borneo, but not before from British India."

GAHNIA.

G. tristis, Nees. Sea shores, more rarely from inland localities.

Rather common, but not to be met with everywhere. Usually in rocky spots above the sea. There is a weaker form which occurs in woods in the interior, with very much slenderer leaves.

Singapore—Forts Siloso and Serapong, Upper Mandai, Tampe-nis Road near Changi. Pulau Battam.

Karimon Isles.

Selangor—Seppan.

Johor—Seudai River, Tanah Runto.

G. javanica, Zoll. Mountains at a considerable altitude.

Perak—Gunong Batu Puteh at 6,700 feet altitude (WRAY).

G. sp.

Perak—Maxwell's Hill (CURTIS).

SCLERIA.

This genus, which is rather a difficult one, is well represented here, but I am sure that a number more will be found when carefully sought.

Scl. caricina. *Diplacrum caricinum*, R. Br. Common in waste places, paths and damp spots.

Singapore—Tanglin, Tivoli, Changi. Common.

Malacca—Merlimau, Pulau Besar.

Pahang—Kuala Pahang, Pekan.

Scl. lithosperma, Nees. Common in dry country.

Malacca—Alor Gajah.

Penang—Waterfall Garden.

Pahang—Rumpin River, Kuala Pahang.

Sungei Ujong—Lingga River.

Scl. lateriflora, Bekler. Not common.

Singapore—Changi.

Penang—Telok Bahang.

Scl. steudeliania, Miq. Rare.

Penang—Waterfall.

Scl. hebecarpa, Nees. Common in open country.

Singapore—Jurong.

Penang—Tanjong Bunga.

Malacca—(GRIFFITH).

Pahang—Pekan.

Siam—Bangtaphan (Dr. KEITH).

Scl. oryzoides, Presl. River banks. Local, but plentiful where it occurs.

Singapore—Changi towards Tanah Merah.

Malacca—Banks of Merlimau River, and also near Malacca, Ching.

Native name, Rumput Leuku Dana. Possibly an error for "Lichu Daun," polishing leaves, *i.e.*, used for polishing wood.

Scl. malaccensis, Bekler. Very common, often covering large tracts of wet ground.

Singapore—Everywhere, Tanglin, Jurong, Bukit Timah.

Malacca—Common.

Selangor—Kuala Lumpur.

Pahang—Pekan.

Scl. multifoliata, Beckler. In thickets, scrambling through bushes.

Malacca—Pulau Besar.

Pahang—Pekan.

Scl. laxvis, Willd.

Johor—Tanah Merah Road.

Pahang—Kuala Pahang.

Scl. sumatrensis, Retz. Common in dry open places.

Singapore—Tanglin, Bukit Timah, Jurong.

Penang—Government Hill, Tanjong Bunga.

Malacca—Alor Gajah, and other places.

Johor—Tanah Merah Road.

Sungei Ujong—Gunong Brumbun.

Selangor—Bukit Kuda, Klang.

Perak.

Pahang—Kuala Pahang.

Siam—Bangtaphan (Dr. KEITH).

It is called Rumput Kumbar in Sungei Ujong. "Kumba" is an ornament made of coco-nut leaves, which is perhaps the origin of the name.

Scl. chinensis, Kth. New to this country.

Pahang—Kuala Brawas, Pekan.

Scl. androgyna, Nees. Collected by GRIFFITH in Malacca. I have not met with.

CAREX.

C. cryptostachys, Brngn. Wet rocky places.

Singapore—Bukit Timah.

Penang—Government Hill.

Perak—Taiping.

Sungei Ujong.

Native name, Rumput Ringgin (Sungei Ujong).

C. sp.

Penang Hill, rocky places on the summit.

G R A M I N E Æ.

PASPALUM.

P. scrobiculatum, Linn. Common everywhere, and apparently native.

Singapore—All over the island.

Johor—Tanah Merah.

Malacca—Ayer Panas.

Selangor—Kuala Lumpur.

Penang—Waterfall Garden.

Sungei Ujong.

Pahang—Pekan, Kuala Pahang, etc.

Natives names, Rumput Tulo Sintadok, "caterpillar grass," R. Liku, "smooth grass" (Malacca), R. Ijok, "green grass" (Sungei Ujong).

P. distichum, Burn. In sandy mud near the seashore. Common.

Singapore—Tanjong Karong, Bajau, Sungei Murai.

Johor—Tanah Merah Road, Tanjong Bunga.

Penang—Bagan Jermal.

Pahang—Sungei Meang.

P. conjugatum, Berg. Native of South America, but now widely distributed. It chiefly occurs along paths and in waste places near villages, being transported by its very adherent fruits, but in the wilder parts of the country does not occur. It forms a good fodder grass.

Singapore—Common everywhere.

Johor—Shores of the strait near Johor.

Malacca—Common.

Penang—Waterfall Garden.

Pahang—Pekan.

Siam—Bangtaphan (Dr. KEITH).

Sungei Ujong—Common.

ISACHNE.

I. australis, R. Br. Common in damp swampy spots.

Singapore—Tanglin, Changi.

Johor—Summit of Mount Ophir (HULLETT), Pengerang.

Pahang—Pekan, Katapong.

Penang—Waterfall Garden.

Malacca—Ayer Panas, common.

I. pulchella, Roth. Common in rice fields and wet spots.

Singapore.—Chan Chu Kang, Ang Mo Kio, Kranji.

Malacca—Bukit Tunggal.

Penang.

Ophismenus burmanni, Retz. Not common.

Penang—Sepoy Lines.

O. compositus, Wight. Shady woods. Widely distributed, but not very common.

Malacca—Bukit Tunggal.

Pahang—Kwala Pahang.

Pulau Buru, near Karimon Islands.

PANICUM.

P. (Digitaria) sanguinale, Trin. Common in waste ground.

Singapore—Botanic Gardens, Changi.

Penang—Waterfall.

Pahang—Rumpin River, Sungai Meang.

Var. *australe*. Occurs in Singapore, and Penang near the Waterfall.

P. parvulum, Nees. Common weed.

Singapore—Botanic Gardens, Changi, Jurong, Raffles Light-house.

Penang—Waterfall.

Pahang—Sungei Meang.

P. volascens, Nees. Rare.

Singapore—Bajau. A form with glabrous spikelets.

P. heteranthum, Nees. Rare. Sandy shores, beneath the casuarinas.

Pahang—Rumpin River, Sungai Meang.

P. cimicinum, Retz. Weed near villages and old cultivations.

Singapore—Tanglin, Tivoli, Changi, Chan Chu Kang.

Penang—Waterfall, Tanjong Bunga.

P. (Brachiaria) nodosum, Kth. *P. multinode* Presl. Common in thickets and woods.

Singapore—Tanglin, Dalvey Road, etc., Chan Chu Kang.
Freshwater Isle.

Penang—Waterfall, Government Hill, Pulau Betong.

Pahang—Pekan.

Kelantan—Kamposa.

Native name, Sarong Buaya (Penang). Perhaps this should be
“Sarang,” i.e., crocodile’s nest.

P. subquadriparum, Trin. Rare.

Singapore—Changi.

P. luzonense, Presl. Not very rare. Chiefly in new cleared ground
and roadsides.

Penang—Waterfall.

Malacca—Alor Gajah.

Pahang—Katapong.

Perak.

P. trigonum. Shady woods. Common.

Malacca—Pulau Besar, Sungai Udang.

Penang—Sepoy Lines.

Pahang—Pekan, Kwala Pahang.

Sungei Ujong—Bukit Sulu.

Native name, Rumput Mutubong, R. Kurubong Padi (Sungei
Ujong). Perhaps grass which surrounds the rice, i.e., weed
in the rice fields.

P. radicans, Retz. Shady woods. Common.

Singapore—Bukit Timah, Changi, Tanglin.

Penang—Government Hill.

Pahang—Pekan.

Selangor—Klang.

Malacca—Alor Gajah, Ayer Molek, etc.

Perak.

Sungei Ujong—Port Dickson.

Native name, Rumput Telor Ikan (“fish-egg grass”), from the
resemblance of the small black spikelets to fish eggs.

P. ovalifolium, Poir. Rare. Shady woods.

Pahang—Kwala Pahang.

Penang—Government Hill.

Malacca—Bukit Bruang.

P. ischæmoides, Retz. Sandy spots. Local.

Singapore—Changi.

Pahang—Pekan.

Kelantan—Kamposa.

Penang—Waterfall.

Malacca—Ching.

P. concinnum, Nees. A very handsome grass not rare in woods.

Singapore—Sumbawang, Tanglin.

22 GRASSES AND SEDGES OF THE MALAY PENINSULA.

Malacca—Selendor, Bukit Sadanau.

Penang—Moniot's Road.

Perak.

Selangor—Klang.

Called Rumput Jangot Ali and Akar Tongkat Ali. *i.e.*, "Ali's beard grass," "Ali's walking-stick root." The roots are eaten by Malays in Malacca along with betel-nuts. It is also called Rumput Poko Kulubong.

P. incomptum, Trin.

Perak—Gunong Hijau (WRAY).

P. jumentorum. Is cultivated here and there for fodder.

P. (Hymenachne) auritum, Presl. Pools and ditches. Not rare.

Singapore—In the Reservoir, Changi, Ang Mo Kio.

Penang—Waterfall, Tanjong Bunga.

Pahang—Pekan, Mahang.

Siam—Bangtaphan (Dr. KEITH).

Malacca—Stream near Alor Gajah.

P. myurus, Meyer. Ditches. Not very common.

Malacca—Ayer Panas, Ching.

Penang—Near the coast.

Sungei Ujong—Burunang, Kwala Sawa, where it is called Rumput Kumpai, and used for making lamp-wicks.

P. myosuroides, R. Br. Common in ditches.

Singapore—Ang Mo Kio, Kranji.

Malacca—Chabau.

Pahang—Pekan.

Penang—Pulau Betong.

Native name, Rumput Kumani.

P. indicum, L. Very common. Dry waste places.

Singapore—Bukit Timah, Changi, etc.

Johor—Tanah Merah.

Pahang—Praman.

Penang—Waterfall.

Malacca—Selendar, etc.

Native names, Rumput Bidis, R. Bonto Darat.

P. Ridleyi, Hackel. Dry thickets.

Malacca—Pulau Besar, Bukit Bruang.

Pahang—Pekan.

Near *P. foliosum* and *zizanioides*; with the latter General MONRO classed it. It was also collected by GRIFFITH in Malacca.

P. plicatum. Rare.

Selangor—Caes, Kwala Lumpur.

Sungei Ujong—Pantai.

P. (Echinochloa) crus-galli, L. Not common.

Singapore.

Penang—Waterfall, Bagan Jermal.

Kelantan—Kamposa.

Selangor—Bukit Kudah.

P. colonum, L. Common in waste grounds.

Singapore—Tanglin, Changi.

Penang—Near the coast.

Malacca—Near the town.

SETARIA.

S. glauca, Beauv. Open country. Not very common.

Singapore—Ang Mo Kio, Tanglin.

Penang—Abundant in paddy-fields.

Malacca—Chenana Puteh.

Pahang—Pekan.

Native name, Rumphut Julong-Julong. Perhaps "julung-julung," waving grass.

S. dasyura. Waste places, open country.

Singapore—Chan Chu Kang.

Pahang—Pekan.

PENNISETUM.

P. italicum, L. Millet, a plant rarely cultivated here, has turned up now and again as a waif of cultivation, Malacca.

THUAREA.

Th. sarmentosum, Thouars. In sand on the sea shore. Rare.

Singapore—Changi near the Police Station.

Pahang—Common under the casuarinas on the shore at Rumpin River, Cherating and Sungei Meang.

SPINIFEX.

S. squarrosus, Labill. Porcupine grass. Sandy shores of the East Coast. Plentiful in places.

Siam—Bangtaphan (Dr. KEITH).

Pahang—Rumpin River, Cherating, Sungei Meang, Kwala Pahang.

It is very curious to see the detached bristling heads of this grass whirled along the sands by the wind.

LEPTASPIS.

L. urceolata. Damp woods. Local, but very widely distributed.

The spikelets are very adhesive, and by adhering to animals get carried about the jungle.

Singapore—Pulau Ubin, Chan Chu Kang.

Johor—Summit of Mount Ophir (HULLETT).

Malacca—Selandar, Ayer Panas, Bukit Sadanen, etc.

Selangor—Kuala Lumpur, Bukit Kudah, Bukit Etam (KEL-SALL).

Perak—Tapa (WRAY).

Sungei Ujong—Gaong Jalan.

It is called Tampa Kulang or Rulang; Tampo Glang and Getah Puyuh (Malacca), "pigeon birdlime," because the spikelets adhere to pigeons.

COIX.

C. lachryma-Jobi, L. Job's tears. Is apparently not native. It occurs commonly near villages, as in Singapore at Selitar; near Johor town; Penang, Bukit Tumujang; Sungai Ujong, etc.

The native name is Mulai Tikus.

ZEA.

Z. mays, L. Maize is cultivated, but to a small extent, and chiefly used as a vegetable. It is more extensively grown in Kelantan.

ORYZA.

O. sativa, L. Commonly cultivated, and often occurring as an escape.

Native name, Padi Pulot.

O. sativa, Var.? A very curious plant, with broad green leaves and thin flower spikes, the spikelets falling off very readily. Grows in damp thickets and muddy spots by the stream at Ayer Etam in Pekan, and also nearer to the town, in the open country at the back. It is perhaps a form of the common rice, gone wild, or possibly a distinct species. It is very distinct and dissimilar to the common form.

LEERSIA.

L. hexandra, Sw. Swampy ground, ditches, etc. Common.

Singapore—Tanglin, Changi, etc.

Penang—Waterfall.

Pahang—Pekan.

Malacca—Rice-fields.

THYSANOLENA.

Th. acarifera, Nees. Woods. Rare.

Penang Hill.

Sungei Ujong.

It is called Buluh Tubarau, and used for making walking canes in Sungei Ujong. It is an elegant bamboo-like grass, forming thick tufts about six feet tall.

PEROTIS.

P. latifolia, Br. Sandy places usually near the sea. Not rare.

Singapore—Changi, Cathedral compound.

Karimon Islands.

Penang—Tanjong Bunga, Telok Bahang.

Pahang—Kuala Pahang, Pekan. Common.

Siam—Bangtaphan (Dr. KEITH).

ZOYSIA.

Z. pungens, L. Sandy ground. Common, especially near the sea.

On the sea-shore it becomes very stiff and wiry. In damper ground it forms a very deep soft turf, but is not suited for lawns, except in sandy spots, where it makes a short compact turf.

Singapore—Common. Changi, Tanglin, Tanjong Ru, etc.

Malacea—Common, in and around the town.

Pahang—Pekan.

Tringganu—Sea shore.

IMPERATA.

I. exaltata, Retz. Rather a handsome lalang, larger and with a more branching spike than the common one. Rare, in thickets.

Singapore—Chan Chu Kang, Toas, Bajau.

Selangor—Pataling near Kuala Lumpur, and Langat.

Sungei Ujong—Along the rail banks between Port Dickson and Kuala Sawar.

It is called Lalang Jawa, i.e., Javanese lalang.

I. cylindrica, Cyr. Far too common in the Peninsula wherever cultivation has spread, and often covering large tracts of country. Its growth after burning of the forests is remarkably rapid, as it propagates itself by its feathery seeds, as well as by its

rhizome. A large tract covered with the plant in fruit looks from a distance as if it were covered with snow. It seems to prefer hot and dry places, but dislikes wet or very sandy soil. In the first, its place is taken by *Scleria malaccensis* and other such plants, in the latter by *Bracken* (*Pteris aquilina*, L.) or *Gleichenia*. It is a grass of very little use, as cattle and horses do not care for it on account of its hardness. Pigs, however, are very fond of the young shoots. Attempts have been made to use it for paper making, but without much success, and a kind of beer is sometimes made from the rhizomes. The plumed seeds are sometimes used to stuff pillows. It is very common in Singapore, Johor, Penang, Malacca, Province Wellesley and Selangor, but seems to be rarer in the less cultivated districts, and notably in Tringganu, Pahang and Kelantan.

SACCHARUM.

S. arundinaceum, Retz. River banks. Local. A very ornamental grass. In good wet localities it grows to a height of 12 feet or more, with very large panicles of flowers.

Selangor—Kwala Lumpur near the Caves.

Pahang—Ayer Etam near Pekan, forming large thickets.

S. officinarum, L. Sugar-cane is cultivated chiefly in Province Wellesley and Perak.

S. Ridleyi, Hackel. Banks of the river at Pekan and for some way up above, forming large tufts and covering a large tract of flat country on the right bank. It has narrow leaves and tall spikes of purple flowers. Professor HACKEL remarks that it is a very interesting plant belonging to the section *Misanthus*, of which only one species (*S. fuscum*, Griff.), an Indian plant, was previously known.

Pollinia ciliata, Linn. Forming large clumps on the river bank. Rare.

Pahang—At Renchong above Pekan.

P. Ridleyi, Hackel. On sandy shores very close to the sea. Rare, but plentiful where it occurs.

Pahang—Rumpin River, Sungei Meang.

Allied to *P. Cumingiana*, Steud., a Philippines plant.

POGONATHERUM.

P. polystachya, R. Br. Often cultivated in Singapore as a pot plant. Not common.

Penang—Rocks by the Waterfall.

Pahang—Banks of the river at Renchong.

Siam—Klingtoi River, Bangtaphan (Dr. KEITH).

DIMERIA.

D. ornithopoda, Trin. Paths and dry open ground. Not rare in Singapore.

Paths in the Garden jungle, and in the grass plots, Tivoli, Selitar. Var. *subramosa*, sub-var. *imperfecta*, Changi.

ROTTBOELLIA.

R. glandulosa, Trin. Not rare on the edges of woods, and in thickets.

Singapore.

Pulau Buru near Karimon Isles.

Selangor—Caves, Kwala Lumpur, Bukit Kudah.

Pahang—Pekan, Rumpin River.

R. geminata, Hackel. Open country in Pekan and Rumpin River. Rare.

This is a new and curious species, which has not as yet been found elsewhere. It was described from these specimens by Professor HACKEL.

R. sp. Changi.

ISCHÆMUM.

I. muticum, L. One of our commonest grasses, forming a good turf and a good fodder grass. Very variable in height and form. In long grass or fern, it becomes drawn up and tall, in open dry spots, more prostrate, shorter and stiffer, creeping widely. Singapore, Johor, Penang, Malacca, Sungei Ujong. Very common.

Pahang—Pekan, Sungei Meang.

Perak—Changkat Jerim (WRAY).

Siam—Bangtaphan (Dr. KEITH).

The natives call it Rumput Trutoos, R. Tamaga, and consider its leaves a cure for headache.

I. ciliare, Retz. Common on roadsides in Singapore, and probably elsewhere in the Peninsula. I have gathered it at Kranji, Bukit Timah and Ang Mo Kio.

I. timorense, Kunth. Roadsides.

Singapore—Kranji, Tanglin.

Penang.

I. aristatum, L. Dry open country. Not common.

Singapore—Blakang Mati.

Sungei Ujong—Without locality.

Malacca—Near Ayer Molek.

Var. *submuticum*, Hack. A variety with the very small awn enclosed in the glumes. Fresh Water Island.

This plant is called Rumput Ekor Chari.

ANDROPOGON.

A. contortus, L. Sandy turf near the sea shore.

Singapore—Changi near the Police Station.

Malacca—Pulau Besar.

Penang—Waterfall Gardens, Batu Feringgi.

Pahang—Near the Sultan's tombs, Kwala Pahang.

A. aristulatus, Hochst. Sandy shores. Rare.

Siam—Bangtaphan (Dr. KEITH).

Pahang—Kwala Pahang, Pekan.

A. aciculatus, Retz. Very common and known in the Straits as "love grass." It forms a good turf, and in Pahang covers large tracts of country.

Singapore, Johor, Malacca.—Abundant.

Penang—Waterfall Gardens.

Pahang—Pekan, etc.

A. intermedius, R. Br. The Straits form is, Professor HACKEL says, a laxer form than the Australian type. Not common.

Malacca—Ayer Panas.

Pahang—Pekan.

The natives call it Rumput Pipit, "sparrow grass."

A. Schoenanthus, L. and *A. nardus*, L. Often occur as escapes from cultivation, but are not wild here.

A. squarrosum, L. Possibly native, but often cultivated. I have seen it half wild at Bajau in Singapore, and Mr. CURTIS sends it from Tanjung Tokong in Penang.

SORGHUM.

S. vulgare, L., and the variety *saccharatum* are sometimes cultivated.

THEMEDA.

Th. arguens, Hack. Roadsides. Not common.

Malacca—Selandar.

Penang—Telok Bahang, Waterfall Gardens.

It is called in Malacca Rumput Sarang Pipit, "bird's nest"

- grass," as the birds use its spikelets for building their nests.
Th. gigantea, var. *villosa*. Common. A very tall showy grass forming big tufts, and throwing up very tall panicles.
 Singapore—Fort Siloso (said to have been introduced).
 Johor—Tanah Merah Road near Johor Bharu.
 Malacca—Pulau Besar.
 Selangor—Kuala Lumpur, by the railway and near the Caves.
 Penang—Bukit Mertajam.
 Pahang—Pekan.
 Sungai Ujong—Near Kuala Sawar.

APLUDA.

- A. varia*, Hack. Not common. Pastures and river banks.
 Pahang—Katapong, Renchong.

SPOROBOLUS.

- S. diander*, Beauv. Dry spots.
 Singapore—Raffles Lighthouse.
 Malacca—Ayer Panas.
 Johor—Tana Runto.
 Native name, Rumput Tulo Bulalang, *i.e.*, the grass on which the dragon-fly balances itself.
S. elongatus, Beauv. Dry heaths.
 Johor—Tanah Runto. Fresh Water Island.
 Penang—Sepoy Lines.
 Pahang—Pekan.
 Karimon Islands.

ERIACHNE.

- E. chinensis*, Benth. Dry, open, sandy spots. Common where it occurs, but local.
 Singapore—Fort Siloso.
 Pahang—Pekan.
E. trisetoides, Nees. Dry, sandy heaths. Rare.
 Pahang—Pekan and Kuala Pahang, abundant.
 Malacca—Pangkalan Balau.

CYNODON.

- C. dactylon*, L. Rather common in sandy and dry spots.
 Singapore—Common.
 Penang—Sepoy Lines, Waterfall.
 Malacca—in the town.

CHLORIS.

- C. barbata*, Probably introduced from the West Indies.
 Johor—Near the Sawmills.
 Province Wellesley—Batu Kawan.

ELEUSINE.

- E. indica*, L. Very common in waste grounds near villages.
 Singapore—Tanglin, Changi.
 Johor—Tanah Runto, Johor Bharu.
 Penang—Waterfall Gardens.
 Perak—Tapa (WRAY).
 Sungei Ujong—Port Dickson, with a form approaching the cultivated *E. coracana*.
E. aegyptiaca, L. Not very common. On the sea shore.
 Singapore—Changi.
 Pahang—Kuala Pahang, Sungei Meang.

LEPTOCHLOA.

- L. sp.*
 Penang—Bagan Jemal.
L. chinensis, Nees.
 Kelantan—Banks of River Kamposa.

ARUNDO.

- A. donax*, L. This, a native of Southern Europe, is often cultivated here, especially a form with variegated leaves.

PHRAGMITES.

- P. Roxburghii*, Kth. The common reed. Banks of streams and damp spots. Not rare.
 Singapore—Fresh Water Isle.
 Selangor—Kuala Lumpur, Pataling, all along the river.
 Malacca—Merlimau, Selandar.
 Penang—Western Ayer Etam.
 Pahang—Pekan River bank.
 Native name, Rumput Mata Burong Puding, “variegated bird’s-eye grass.”

CENTOTHECA.

- C. lappacea*, Beauv. Very common in woods and along paths.
 Carried about by its adhesive spikelets.
 Singapore—Both the hispid and glabrous varieties common

over the whole island.

Johor—Tanjong Bunga, etc.

Penang—Government Hill, Tanjong Bunga.

Malacca—Ayer Panas, Pulau Besar, etc.

Pahang—Kwala Pahang.

Negri Sembilan—Bukit Tumiang.

Native names, Rumput Silit Kain. Perhaps the grass that damages the clothes, *i.e.*, by adhering to them. R. Darah, "blood grass."

LOPHOTHERUM.

L. gracile, Brngn. Woods. Rather local.

Singapore—Chan Chu Kang.

Malacca—Chabau.

Sungei Ujong.

Perak—Birch's Hill, Larut (WRAY), Taiping (HERVEY).

Native names, Rumput Kururut, R. Jarang, "spreading grass," R. Klurat.

ERAGROSTIS.

E. pilosa, L. Weed in cultivated ground.

Singapore.

Penang.

E. plumosa, Retz. A garden weed. Very common.

Singapore—Abundant.

Penang, Dato Kramat, the Fort.

Malacca—Ayer Panas, etc.

Pahang—Pekan, Katapong.

Kelantan—Kamposa.

E. Brownii, Kth. Dry spots. Widely scattered.

Karimon Islands.

Penang—Government Hill, Waterfall.

Kelantan—Kamposa.

Pahang—Kwala Pahang.

Malacca—Common.

E. zeylanica, Br. Damp, sandy spots.

Singapore—(N. CANTLEY).

Pahang—Kwala Pahang.

E. ferruginea, Thunb. Sandy spots.

Singapore—Changi, Bukit Timah.

Pahang—Pramau, Pekan, Katapong, common.

E. unioloides, Nees. Very common in dry places.

Singapore—Tanglin, Changi, Jurong.

Johor—Seudai River, Johor Bharu.
 Malacca—Tanjong Kling, Ayer Panas.
 Penang—Waterfall.
 Pahang—Pekan.
 Kelantan—Kamposa.

- E. Wightiana**, Nees. Very rare.
 Penang—Near the coast.
E. nutans, Retz. Dry, sandy heaths. Not common.
 Pahang—Pekan.
 Siam—Bangtaphan (Dr. KEITH).

LEPTURUS.

- L. repens**, R. Br. Sands of the sea shore. Rather rare.
 Pahang—Sungei Meang, Rumpin River.

BAMBUSACEÆ.

There are a good number of species of bamboos to be met with in a wild state in the Peninsula, but very few of them have been collected. It is nearly impossible to identify a bamboo out of flower, and, as is well known, it is by no means common to find plants in flower. So that it is almost a rule among tropical botanists that whenever a bamboo is seen to be in flower specimens must be collected. There are large extents of bamboos in many parts of the Peninsula, but of what species is not yet known. I met with a large patch of a species of *Dendrocalamus* in Bukit Kuda near Klang, of which every joint was full of most excellent water, even the twigs being full though the ground beneath was remarkably dry. Several species of bamboo are cultivated, some for ordinary use, others as hedges, or for the edible shoots, especially *Bambusa nana*, the hedge bamboo.

GIGANTOCHLOA.

- G. verticillata**, Monr. Common and often cultivated. I found it in flower at Tivoli in Singapore.
G. heterostachya, Murr.
 Malacca—Ayer Panas (GRIFFITH).
 I have not seen this species.

MELOCANNA.

- M. Blumei**, Nees. Singapore—Roadside at Selitar. The flowering glumes, HACKEL says, are larger than the type. It is perhaps

a variety. It is not a large species, about 12 or 14 feet tall, with rather broad dark green leaves.

M. gracilis, Kurz.

Singapore—(WALLICH 5,032).

I have not seen this. It appears to be a small plant about 10 feet tall.

DENDROCALAMUS.

D. strictus, Nees. MUNRO, in the Monograph of Bamboos, mentions having received this from Singapore from MONTGOMERIE, and says that it is a variety with very large whorls of the inflorescence. I do not think the species is anywhere wild in Singapore, but perhaps his specimens came from a garden. It is the well-known male bamboo so much in request for spear handles.

D. flagellifer, Munro. Common and probably native, but it is most frequently seen near villages, in Singapore at least.

Singapore—Jurong.

Malacca—Bukit Sabukor.

Siam—Bangtaphan, extremely common (Dr. KEITH).

D. giganteus, Munro. *Bambusa gigantea*, Wallich. WALLICH obtained his specimens from Penang, but whether it was wild there, or cultivated, does not appear. I have not seen or heard of it from there. It is stated to be indigenous to Malacca, and Mr. DERRY told me he thinks he has found the plant in Bukit Sadanen, whence he sent cuttings to the Botanic Gardens. The magnificent plants in Peradeniya Gardens, Ceylon, are well known to every visitor there. It has been often introduced into Singapore, but does not grow at all to its normal size, and indeed appears not to thrive at much less than 1,000 feet altitude.

BAMBUSA.

B. nana, Thw.

The hedge bamboo most cultivated, supposed to be a native of China.

